

**AMENDMENTS TO THE SPECIFICATION**

On page 2, Para 0003, Line 21, please replace the original paragraph with the following amended paragraph:

Baseline modeling of a product or process generally provides an understanding of the performance of an "ideal" product or process over time. An engine is one type of product or process that baseline modeling is suitable for use. Engine baseline modeling has a multitude of uses including, but not limited to, determining when an engine performs out of specification, predicting when an engine failure will occur, detecting abnormal conditions, determining the quality of an engine and designing new engines. Typically, engine baseline models are developed from data gathered from thermodynamic cycle analyses and simulation. First, models of ideal values are created and indexed by variables such as altitude, temperature, power setting, and air speed. Once data from the normal operation of the engine is available, these models are updated by analyzing data corresponding to a particular model characteristic. An engineer then looks for data that are similar for the specified engine variables (e.g., altitude, temperature, power setting, air speed), groups the similar data, averages them for each variable and performs other operations as desired. The engineer then plots data for each of the variables. The plots provide interrelationship information between each of the engine variables, which the engineer uses to create tables of typical operational parameters of the baseline model. These tables of parameters are used as the basis of comparison for engine operation. Differences from the baseline model may indicate engine faults or deterioration trends.

On page 4, Para 0006, Line 14, please replace the original paragraph with the following amended paragraph:

The present invention overcomes the problems noted above, and provides additional advantages, by providing a system, method and computer readable medium

that stores instructions for instructing a computer system, to perform engine baseline modeling. In one embodiment of the present invention, an engine service database contains engine data relating to time varying measurements for at least one engine. A preprocessor processes the engine data into a predetermined format. An engine baseline modeling component builds an engine baseline model from the preprocessed data, using a regression analysis, and wherein the output engine baseline model is adjusted for time varying effects on the measured/modeled data and parameters. ~~Estimate~~ Estimated trends for each parameter of the baseline are calculated to assist in fault determination.

On page 20, Para 0043, Lines 6-7, please replace the original paragraph with the following amended paragraph:

The engine baseline modeling component 34 then performs another regression at 68. The engine baseline modeling component 34 applies a second regression to improve the parameter estimates by using a ~~cleaner~~ cleaned data set. Again, the metric component 44 determines additional residuals at 70. Alternatively, the metric component 44 can generate plots of the residuals if a user desires. At 72, the engine baseline modeling component determines whether there are any more segments that have to be analyzed. If there are more segments, then the next segment is analyzed at 74 and blocks 60-72 are repeated. This process continues until it is determined at 72 that there are no more segments. Once it has been determined that there are no more segments, then the model diagnostics component 36 evaluates the performance of the of the engine baseline model at 76 and generates certain statistical outputs that relate to the model.